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(19) **United States**(12) **Patent Application Publication****Wang et al.**(10) **Pub. No.: US 2020/0409428 A1**(43) **Pub. Date: Dec. 31, 2020**(54) **FOLDING ELECTRONIC DEVICES WITH
GEARED HINGES**(71) Applicant: **Apple Inc.**, Cupertino, CA (US)(72) Inventors: **Kai Wang**, San Jose, CA (US);
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(57)

ABSTRACT

An electronic device has a foldable display. First and second portions of an electronic device housing for the device may be joined using a hinge. A flexible display may overlap the first housing portion and the second housing portion and may bend along a bend axis as the first and second housing portions are rotated relative to each other using the hinge. The hinge may include toothed members such as gears and a rack member. The rack member may have a surface with curved portions. The gears may include rotating gears that walk along the curved portions of the rack member as the electronic device is folded and unfolded. The hinge may include gears that are fixedly attached to the first and second housing portions and that engage the rotating gears. Linkage members may hold together gears and the rack member.

